1. A wireless audio transmission and reception system comprising:

a pulse width amplifier to receive an analog signal and modulate a pulse width of a digital timing signal with said analog signal, such that the pulse width is proportional to an amplitude of said analog signal to provide a pulse width modulated signal;

an up-converter in communication with the pulse width amplifier to receive the pulse width modulated signal and convert said pulse width modulated signal to a modulated carrier signal;

a transmitter in communication with the modulated carrier signal to transfer the modulated carrier signal wirelessly;

a receiver to receive the modulated carrier signal;

a down-converter in communication with the receiver to receive the modulated carrier signal and extract the pulse width modulated signal from the modulated carrier signal; and

an integrator in communication with the down-converter to receive the extracted pulse width modulated signal and to restore the analog signal.

2. The system of claim 1 further comprising power amplifier in communication with the integrator to receive the analog signal and amplify said analog signal and transfer said amplified analog signal to a transducer.

3. The system of claim 1 wherein the pulse width amplifier comprises

a comparator having a first input to receive the analog signal and a second input to receive the timing signal, said timing signal having a triangular form such that, as said comparator compares the analog signal and the timing signal, the pulse width modulated signal is provided to an output of said comparator.

4. The system of claim 1 wherein the up-converter comprises a modulation apparatus to combine a carrier frequency with the pulse width modulated signal to form the modulated carrier signal.

5. The system of claim 4 wherein the modulation apparatus is selected from a group of modulation apparatus consisting of frequency shift keying modulation apparatus, amplitude shift keying modulation apparatus, phase shift keying modulation apparatus, quadrature phase shift keying modulation apparatus, time domain multiple access modulation apparatus, and code domain multiple access modulation apparatus.

6. The system of claim 1 wherein the down-converter comprises a demodulation apparatus to extract the pulse width modulated signal from the modulated carrier signal.

7. The system of claim 6 wherein the demodulation apparatus is selected from a group of demodulation apparatus consisting of frequency shift demodulation apparatus, amplitude shift keying demodulation apparatus, phase shift keying demodulation apparatus, quadrature phase shift keying demodulation apparatus, time domain multiple access demodulation apparatus, and code domain multiple access demodulation apparatus.

8. The system of claim 1 wherein the integrator is a low pass filter having a cut off frequency suitable to pass the analog signal and remove the timing signal.

9. The system of claim 1 wherein the carrier frequency is at least 900 MHz.

10. A wireless audio transmitter system comprising"

a pulse width amplifier to receive an analog signal and modulate a pulse width of a digital timing signal with said analog signal, such that the pulse width is proportional to an amplitude of said analog signal to provide a pulse width modulated signal;

an up-converter in communication with the pulse width amplifier to receive the pulse width modulated signal and convert said pulse width modulated signal to a modulated carrier signal; and

a transmitter in communication with the modulated carrier signal to transfer the modulated carrier signal wirelessly;

11. The transmitter system of claim 10 wherein the pulse width amplifier comprises

a comparator having a first input to receive the analog signal and a second input to receive the timing signal, said timing signal having a triangular form such that, as said comparator compares the analog signal and the timing signal, the pulse width modulated signal is provided to an output of said comparator.

12. The transmitter system of claim 10 wherein the up-converter comprises a modulation apparatus to combine a carrier frequency with the pulse width modulated signal to form the modulated carrier signal.

13. The transmitter system of claim 12 wherein the modulation apparatus is selected from a group of modulation apparatus consisting of frequency shift keying modulation apparatus, amplitude shift keying modulation apparatus, phase shift keying modulation apparatus, quadrature phase shift keying modulation apparatus, time domain multiple access

modulation apparatus, and code domain multiple access modulation apparatus.

14. The transmitter system of claim 10 wherein the carrier frequency is at least 900 MHz.

15. A wireless audio receiver system comprising"

a receiver to receive the modulated carrier signal;

a down-converter in communication with the receiver to receive the modulated carrier signal and extract the pulse width modulated signal from the modulated carrier signal; and

an integrator in communication with the down-converter to receive the extracted pulse width modulated signal and to restore the analog signal.

16. The receiver system of claim 15 wherein the down-converter comprises a demodulation apparatus to extract the pulse width modulated signal from the modulated carrier signal.

17. The receiver system of claim 16 wherein the demodulation apparatus is selected from a group of demodulation apparatus consisting of frequency shift demodulation apparatus, amplitude shift keying demodulation apparatus, phase shift keying demodulation apparatus, quadrature phase shift keying demodulation apparatus, time domain multiple access

demodulation apparatus, and code domain multiple access demodulation apparatus.

18. The receiver system of claim 15 wherein the integrator is a low pass filter having a cut off frequency suitable to pass the analog signal and remove the timing signal.

19. The receiver system of claim 15 wherein the carrier frequency is at least 900 MHz.

20. A method for wireless transmission of an analog signal comprising the steps of:

acquiring the analog signal;

comparing said analog signal with a timing signal;

from said comparing, forming a pulse width modulated signal;

up-converting the pulse width modulated signal to a modulated carrier signal;

transmitting said modulated carrier signal;

receiving said modulated carrier signal;

down-converting said modulated carrier signal to restore the pulse width modulated signal; and

integrating the restored pulse width modulated signal to extract said analog signal.

21. The method of claim 20 further comprising the steps of:

amplifying the restored analog signal

transferring the amplified analog signal to a transducer.

22. The method of claim 20 wherein the comparing the analog signal to the timing signal and forming the pulse width modulated signal comprises the step of:

forming the timing signal to have a triangular waveform;

comparing the amplitude of the analog signal to the amplitude of the triangular waveform;

if the amplitude of the analog signal is greater than the amplitude of the timing signal, setting the pulse width modulated signal to a first logic level; and

if the amplitude of the analog signal is less than the amplitude of the timing signal, setting the pulse width modulated signal to a second logic level.

23. The method of claim 20 wherein the up converting the pulse width modulating signal to the modulated carrier signal comprises the steps of

combining a carrier frequency with the pulse width modulated signal to form the modulated carrier signal.

24. The method of claim 23 wherein the combining of the carrier frequency with the pulse width modulated signal is a modulating of the carrier frequency by the pulse width modulated signals, said modulating being selected from a group of modulating steps consisting of frequency shift keying modulating, amplitude shift keying modulating, phase shift keying modulating, quadrature phase shift keying modulating, time domain multiple access modulating, and code domain multiple access modulating.

25. The method of claim 20 wherein the down-converting said modulated carrier signal to restore the pulse width modulated signal comprises the step of:

combining a local oscillator signal with the modulated carrier signal to restore the pulse width modulated signal.

26. The method of claim 23 wherein combining of local oscillator signal with the carrier frequency is a demodulating of the carrier frequency to extract the pulse width modulated signals, said demodulating being selected from a group of demodulating steps consisting of frequency shift keying demodulating, amplitude shift keying demodulating, phase shift keying demodulating, quadrature phase shift keying demodulating, time domain

multiple access demodulating, and code domain multiple access demodulating.

27. The method of claim 20 wherein the carrier signal is at least 900 MHz.